

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows. This listing of claims replaces all prior versions and listings of claims in the application.

1-15 (canceled).

16 (previously presented). The catheter of claim 33, wherein:

the arbitrarily-shaped electrode is formed by electro-depositing a conductive, biocompatible material within a depression formed on the catheter tip; and
the catheter tip is further overmolded over the electrode.

17 (previously presented). The catheter of claim 33, wherein:

the catheter body comprises a lumen tube and a jacket, the lumen tube nested within the jacket;
the energy delivery element is formed on an exterior surface of a lumen tube;
and

the arbitrarily-shaped electrode extends through the jacket to the energy delivery element.

18 (canceled).

19 (previously presented). The catheter of claim 33 wherein the arbitrarily-shaped electrode is comprised of a biocompatible, conductive material.

20 (previously presented). The catheter of claim 19 wherein the biocompatible conductive material is selected from the group consisting of platinum and gold.

21 (previously presented). The catheter of claim 33 wherein the at least one energy delivery element is a wire.

22 (previously presented). The catheter of claim 21 further comprising a tube along which the wire is run.

23 (previously presented). The catheter of claim 22 further comprising a jacket surrounding the tube.

24 (previously presented). The catheter of claim 22 wherein the tube and the wire are co-extruded.

25 (previously presented). The catheter of claim 33 wherein the at least one energy delivery element is operably connected to the at least one arbitrarily-shaped electrode by a via.

26 (previously presented). The catheter of claim 25 wherein the via partially overlays at least a portion of the wire and underlies at least a portion of the electrode.

27 (previously presented). The catheter of claim 33 wherein the at least one energy delivery element is a trace.

28 (previously presented). The catheter of claim 27 wherein the trace is electro-deposited on an exterior portion of the catheter body.

29 (previously presented). The catheter of claim 27 further comprising a jacket surrounding at least a portion of the trace.

30 (previously presented). The catheter of claim 29 wherein at least a portion of the trace is exposed from the jacket and the exterior portion of the catheter body, and the exposed portion of the trace is electrically connected to the arbitrarily-shaped electrode.

31 (previously presented). The catheter of claim 33 wherein the at least one arbitrarily-shaped electrode comprises a plurality of arbitrarily-shaped electrodes insulated from one another by the overmold of the catheter.

32 (canceled).

33 (currently amended). A catheter for use in a medical procedure, comprising:

a catheter body;
a catheter tip operably connected to the catheter body;
at least one arbitrarily-shaped electrode overmolded by a portion of the catheter, at least a portion of the at least one arbitrarily-shaped electrode being exposed through and completely surrounded by the overmold of the catheter, wherein the portion of the overmold of the catheter remaining adjacent the exposed portion of the at least one arbitrarily-shaped electrode provides a generally smooth finish to the catheter; and
at least one energy delivery element operably coupled to the at least one arbitrarily-shaped electrode.